METHOD OF FABRICATING A MRAM DEVICE

ABSTRACT

A method of fabricating a magnetic random access memory (MRAM) device is disclosed. The method reduces the number of mask steps and processing steps required to fabricate the MRAM device. A first conductive layer and a sense layer are patterned in a first mask step. A subsequent etching step forms a bottom electrode and a sense layer that are continuous with each other in a first direction. A second conductive layer and a plurality of layers of material required to form a magnetic tunnel junction stack are patterned in a second mask step. A subsequent etching step forms a top electrode and a plurality of layers of material that are continuous with each other in a second direction, and a plurality of discrete sense layers. The discrete sense layers and the plurality of layers of material define a plurality of magnetic tunnel junction devices.